

Box 4

HEDGE FUND INVESTOR REDEMPTION RESTRICTIONS AND THE RISK OF RUNS BY INVESTORS

In contrast to traditional open-end investment funds, which provide daily liquidity for investors, hedge funds are well known for having complicated redemption restrictions. Moreover, various combinations of these restrictions further mask the true vulnerability of hedge funds to investor withdrawals. Against this background, this box provides an overview of various investor redemption restrictions used by hedge funds and assesses the amount of time that would be needed before investors could withdraw all of their capital from the hedge fund sector.

In principle, the main purpose of the various redemption restrictions used by hedge funds should be to match investor redemption risk with the liquidity of the underlying investments (see Table A). However, stricter redemption terms also ensure longer and therefore larger flows of management fee income for hedge fund managers, who may therefore prefer to tie up investors money for as long as possible, subject to personal liquidity preferences when personal capital is invested in a fund. In practice, in the case of an individual hedge fund, the ultimate mix of redemption terms depends on the supply and demand for investments into this particular hedge fund, and the strength of broader demand for hedge fund-like investments. It is also noteworthy that hedge fund redemption frequencies tend to coincide with subscription

Table A Summary of hedge fund redemption terms

Lock-up period	These are relevant only at the beginning of the investment. In a hard lock-up, investors have no right to redeem before this period has ended, whereas in a soft lock-up they can withdraw their funds if they agree to pay an early redemption fee (for example of 2-5%).
Redemption frequency	In the case of typical monthly or quarterly liquidity (see Table B), the total net asset value (NAV) and NAV-per-share calculation date is usually at the end of a calendar month, and the dealing date is the first business day of the following month.
Redemption notice period	This is particularly helpful for smoothing out investment liquidations owing to redemption requests. It also provides time to persuade investors to cancel their redemption requests (see Table B).
Gates	Gate provisions limit withdrawals per month (quarter) as a proportion of NAV.
Side letters	Can provide specific, usually the largest, investors with a variety of advantages, including preferential liquidity terms. It confers disadvantages on other (uninformed) investors.
Side pockets	A separate class of capital to account for illiquid holdings. Side-pocketed assets usually do not earn performance fees and are non-redeemable until the assets are finally sold.
Payout period	Initial payout can be 75-90% of an estimated NAV within 10-15 business days after the dealing date and the balance at some point later or after the audit of financial statements. It is useful for smoothing out investment liquidations and for the management of cash flows.

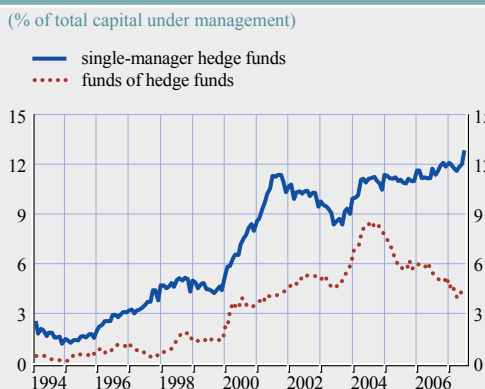
frequencies, although some hedge funds offer more frequent regular possibilities for investors to inject rather than withdraw capital.

The use of lock-up periods has been reportedly increasing, particularly by large, high-profile hedge funds. This trend has increased the estimated lower boundary of the effective share of locked-up single-manager hedge fund capital (see Chart A). By contrast, the estimated share of locked-up funds of hedge funds' (FOHFs) capital has been on a downward trend since the end of 2004, probably because intense competition among FOHFs for investors' money has led to less strict redemption constraints. Although lock-up periods are often cited as an important redemption restriction, they are important only at the outset of investment, and after the end of an initial lock-up period, redemption frequency, notice period and gate provisions become more relevant.

A notice period can effectively lock up an investor's funds until the second closest redemption date if the investor misses the deadline to apply for the nearest redemption. As shown in Table B, at the end of June 2007 FOHFs offered more frequent redemption possibilities to investors than single-manager hedge funds, but their redemption notice periods were longer, thereby somewhat compensating for higher redemption risk. Gate provisions serve as an additional safeguard against sudden investor outflows, but their activation sends a bad message to investors, and therefore may signal an eventual liquidation of the hedge fund.

The impact of various redemption restrictions can be illustrated by modelling the estimated time needed for investors to withdraw all their

Chart A Estimated share of locked-up hedge fund capital under management



Sources: Lipper TASS database and ECB calculations.
 Note: An assumption was made that net flows equal gross flows. Therefore, only net inflows were included in the calculations of locked-up capital. Calculations also took into account the fact that the value of locked-up capital grew at a rate determined by net returns of a hedge fund.

Table B Global hedge fund redemption frequency and notice periods by strategy

(June 2007; % of capital under management)

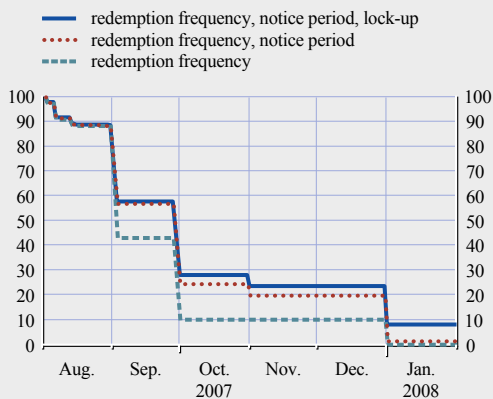
Redemption notice	Daily or weekly	Two weeks	Monthly	Redemption frequency				Other	Total
				Quarterly	Six months	One year			
single-manager hedge funds									
0-7 days	9	2	6	...	...	...	...	18
8-16 days	...	...	7	1	...	...	...	7
17-35 days	...	...	25	9	1	...	...	35
36-45 days	...	...	2	6	1	1	...	9
46-95 days	...	...	6	16	2	5	...	29
96-365 days	...	...	...	1	...	...	...	1
Total	10	2	45	33	3	7	...	100	
funds of hedge funds									
0-7 days	2	...	4	...	...	...	...	6
8-16 days	...	...	4	1	...	...	...	5
17-35 days	...	...	34	2	...	...	...	36
36-45 days	...	...	9	6	...	...	...	15
46-95 days	...	...	8	22	1	6	...	37
96-365 days	...	...	...	1	...	...	...	1
Total	3	...	58	31	2	6	...	100	

— zero
... close to zero

Sources: Lipper TASS database and ECB calculations.

Chart B Hypothetical run by investors on hedge funds

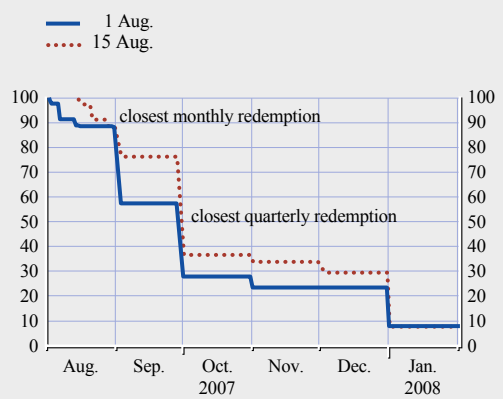
(1 Aug. 2007 = 100% of single-manager hedge fund capital under management)



Sources: Lipper TASS database and ECB calculations.
Note: Excluding funds of hedge funds. It was assumed that the dealing dates for monthly, quarterly, semi-annual and annual redemptions were the first business day of a calendar month, quarter, half year and full year respectively. The dealing dates for weekly and fortnightly redemptions were Tuesdays; for semi-monthly redemptions – the first business days at the beginning and after 15 of a calendar month. In all other rare cases (biennial, triennial, variable, not defined), an annual redemption frequency was assumed. It was also assumed that hedge fund capital under management on 1 August was the same as on 31 July and that hedge funds' daily net returns and gross inflows were zero throughout the whole period.

Chart C Hypothetical run by investors on hedge funds two weeks later

(1 Aug. and 15 Aug. 2007 = 100% of single-manager hedge fund capital under management)



Sources: Lipper TASS database and ECB calculations.
Note: Excluding funds of hedge funds. It was assumed that hedge funds' capital under management on 1 and 15 August was the same as on 31 July.

capital from the hedge fund sector. Moreover, several versions of this type of “fire sale” stress test could be implemented by sequentially incorporating the impact of additional redemption restrictions. For this purpose, it was assumed that all investors could place their redemption requests on 1 August 2007. It was also assumed that all reported lock-ups were hard lock-ups, although in some cases, hedge funds reported that early redemption was possible before the expiry of a lock-up period subject to the payment of a penalty fee. Furthermore, judging from some notes provided by hedge funds to the database, there were also some soft lock-ups that were not reported as lock-ups.

As shown in Chart B, redemption notice and lock-up periods would significantly slow down the decline of hedge fund capital under management in the event of widespread investor exodus. The different lines in Chart B show estimated capital withdrawal patterns depending on how many redemption restrictions were taken into account, and indicate that the largest outflows can occur when both monthly and quarterly redemption dates coincide. Furthermore, the time when investors start placing their redemption requests is also very important. For example, if investors were to start a run on hedge funds on 15 August instead of 1 August, this would have resulted in a very different “fire sale” redemption profile (see Chart C). Nevertheless, regardless of the start-date, it seems that within a period of around six months investors could withdraw the bulk of their funds from the hedge fund sector.

All in all, the average duration of an investment in a hedge fund is not known, but lock-up periods do not seem to provide the main protection against investor withdrawals, since their shielding effect disappears upon their expiry and many can be avoided with the payment of an early redemption fee. Lower redemption frequencies, longer redemption notice periods and gate provisions may be far more effective measures against the disruptive effects of investor exodus. Furthermore, in times of stress, some hedge fund managers may also decide to move certain assets to side pockets, thereby making these investments non-redeemable, or suspend redemptions altogether and enter into negotiations with investors regarding the future of the fund. As a result, it is very difficult to estimate the time needed for investors to withdraw all their capital from the hedge fund sector, not least because the starting date of mass withdrawals is also very important owing to redemption notice periods. However, points in time when monthly and quarterly redemptions coincide pose the largest redemption risk for the hedge fund sector.